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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
09/729,154	12/04/2000	Chen-Hua Yu	TS97-510B	3076	
7:	590 09/11/2002				
George O. Saile			EXAMINER		
20 McIntosh Drive Poughkeepsie, NY 12603			POMPEY, RO	POMPEY, RON EVERETT	
			ART UNIT	PAPER NUMBER	
			2812		
			DATE MAILED: 09/11/2002		

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	(Applicant(s)			
'			Applicant(s)			
Office Action Summary		09/729,154	YU ET AL.			
		Examiner	Art Unit			
		Ron E Pompey	2812			
Period fo	The MAILING DATE of this communication ap or Reply	pears on the cover s	neet with the correspondence address			
THE - Exte after - If the - If NC - Failu - Any	ORTENED STATUTORY PERIOD FOR REPL MAILING DATE OF THIS COMMUNICATION. nsions of time may be available under the provisions of 37 CFR 1. SIX (6) MONTHS from the mailing date of this communication. e period for reply specified above is less than thirty (30) days, a reploperiod for reply is specified above, the maximum statutory period treeto reply within the set or extended period for reply will, by statuting the period by the Office later than three months after the mailing patent term adjustment. See 37 CFR 1.704(b).	136(a). In no event, however by within the statutory minimu will apply and will expire SIX e. cause the application to be	, may a reply be timely filed m of thirty (30) days will be considered timely. (6) MONTHS from the mailing date of this communication.			
1)⊠	Responsive to communication(s) filed on 13	August 2002 .				
2a) <u></u> □	This action is FINAL . 2b)⊠ TI	his action is non-fina	l.			
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213. Disposition of Claims						
4) 🖂	Claim(s) 23-33 is/are pending in the application	on.				
4a) Of the above claim(s) is/are withdrawn from consideration.						
5) Claim(s) is/are allowed.						
6)⊠	6)⊠ Claim(s) <u>23-33</u> is/are rejected.					
7) Claim(s) is/are objected to.						
8)[8) Claim(s) are subject to restriction and/or election requirement.					
Application Papers						
9)[]	The specification is objected to by the Examine	er.				
10)☐ The drawing(s) filed on is/are: a)☐ accepted or b)☐ objected to by the Examiner.						
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
11)☐ The proposed drawing correction filed on is: a)☐ approved b)☐ disapproved by the Examiner.						
If approved, corrected drawings are required in reply to this Office action.						
12)☐ The oath or declaration is objected to by the Examiner.						
Priority u	ınder 35 U.S.C. §§ 119 and 120					
13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).						
a) ☐ All b) ☐ Some * c) ☐ None of:						
1. Certified copies of the priority documents have been received.						
2. Certified copies of the priority documents have been received in Application No						
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 						
14)∐ A	cknowledgment is made of a claim for domesti	c priority under 35 U	S.C. § 119(e) (to a provisional application).			
a)	☐ The translation of the foreign language procedures are considered in the foreign language procedures. The considered in the foreign language procedures are considered in the foreign language.	visional application	nas been received.			
_		4\ \(\)	priou Summary (DTO 440) D			
2)	e of References Cited (PTO-892) e of Draftsperson's Patent Drawing Review (PTO-948) nation Disclosure Statement(s) (PTO-1449) Paper No(s)	5) 🔲 No	erview Summary (PTO-413) Paper No(s) ice of Informal Patent Application (PTO-152) er:			
S. Patent and Tra TO-326 (Rev		etion Summary	Part of Paper No. 12			

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DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 2. Claims 23-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gardner et al. (US 6,218,720).

Gardner discloses the steps of:

For claims 23-33:

a nitrogen doped insulating liner (210, fig. 7) grown on sidewall of the shallow trenches;

a gap filling insulating material (214, fig. 9) filling the shallow trenches level with the surface of the semiconductor substrate; and

a plurality transistors (218, fig. 12) is formed in the substrate, wherein said nitrogen doped insulating liner acts as a stop to prevent said impurity species from diffusing into said substrate from said gap filling insulating material (col. 8, lns. 15–58 and col. 5, lns. 45-50).

Gardner fails to disclose a plurality of trenches. However, it is well known in semiconductor manufacturing to form a mask that patterns more than one trench, therefore it would be obvious to one of ordinary skill in the art to form a plurality of trenches in Gardner. Also, for claims 24-30, a "product by process" claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at

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17(footnote 3). See also in re Brown, 173 USPQ 685: In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324: In re Avery, 186 USPQ 116 in re Wertheim, 191 USPQ 90 (209 USPQ 254 does not deal with this issue); and In re Marosi et al, 218 USPQ 289 final product per se which must be determined in a "product by, all of" claim, and not the patentability of the process, and that an old or obvious product, whether claimed in "product by process" claims or not. Note that Applicant has the burden of proof in such cases, as the above case law makes clear. "Even though product-by- process claims are limited by and defined by the process, determination of patentability is based upon the product itself. The patentability of a product does not depend on its method of production. If the product in product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product is made by a different process." In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985)(citations omitted).

Response to Arguments

3. Applicant's arguments filed 8-13-02 have been fully considered but they are not persuasive. Applicant arguments are pertaining to method limitations of a product —by — process claims, but not to the structural differences between the prior and the claimed limitation. Therefore, as stated above if the claimed limitations do not structurally distinguish over the prior art, the rejection reads on the limitations that determine patentability in a product-by-process claim.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ron E Pompey whose telephone number is (703) 305-3016. The examiner can normally be reached on flex schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling can be reached on (703) 308-3325. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Ron Pompey Art Unit: 2812

September 9, 2002

John F. Nishling

Supervicory Palent Exominer Technology Center 2800